

Amendments to the Abstract:

Please amend the abstract as follows:

~~The invention relates to device and a method for determining the concentration of a PET tracer in the blood of a patient (1). With the aid of an X-ray CT (5, 6), first of all the spatial position (1) of a volume element (2) body cavity that is filled with blood is determined, which for example can be a part of the aorta or of the left ventricle of the heart of a patient (1). Subsequently, a TOF-PET unit that comprises includes two detector elements (3a, 3b) is set in such a way that it establishes the positioned to place a predefined volume element (2) in the blood filled body cavity. From pairs of annihilation quanta received from the volume element (2) a concentration of the tracer in this volume element (2) and thus in the blood is determined. This value concentration can for example be used within the framework of pharmaco-kinetic examinations which are carried out on the patient (1) with the aid of a three-dimensional PET unit (4).~~

~~Fig. 1~~